



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Kroll, et al.

Application No. 09/693,551

Filed: October 20, 2000

For: ELECTRICAL CARDIAC OUTPUT  
FORCER

To: BOX PATENT APPLICATION  
Assistant Commissioner for Patents  
P.O. Box 2327  
Arlington, VA 22202

) Art Unit: 3762

) Our Ref. 43169.62.1

) Examiner: Jastrzab, Jeffrey R.

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By   
Theresa Russek

#14/D  
B. Webb  
By-7-04

RESPONSE

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The present communication responds to the Notice to Correct Informalities mailed May 22, 2002 for the above-identified application. A restriction requirement was made by Examiner Kamm on November 2, 2001. Applicants responded to the restriction requirement on December 3, 2001. On January 29, 2002, Examiner Jastrzab issued a Notice to Correct Informalities. Applicants then filed a response and supplemental amendment on March 1, 2002, provisionally electing claims 81-143.

In the Notice to Correct Informalities mailed May 22, 2002, the Examiner expressed that Applicants assertion that claims 81-143 read on the elected species cannot be correct. The Examiner stated that claim 114 corresponds to claim 42 which was indicated to be a species separate from claim 143 (original claim 36) and that, currently, claim 143 defibrillates then paces while claim 115 has no defibrillation but only sub-threshold pulses.

Claims 115 and 143, unamended, are reproduced below.

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115. An at least partially implantable device for maintaining some cardiac output of a patient's heart during hemodynamically compromising malfunction using electrical forcing fields, comprising:

- D1
- (a) a power supply;
  - (b) a hemodynamically compromising malfunction detector operatively connected to the power supply;
  - (c) pulse delivery circuitry operatively connected to the power supply for delivering multiple electrical current pulses through portions of the patient's upper body;
  - (d) output control circuitry connected to the hemodynamically compromising malfunction detector, the power supply, and the pulse delivery circuitry for controlling the delivery of multiple electrical current pulses to the patient's upper body after the detection of hemodynamically compromising malfunction, the electrical current pulses having a voltage level less than the voltage necessary to defibrillate the patient, the output control circuitry providing pulses suitable for only producing contraction in the patient's body sufficient to maintain a level of cardiac output which is a fraction of the normal maximum cardiac output until cessation of the hemodynamically compromising malfunction or until other medical intervention is provided; and
  - (e) an internal defibrillator cooperating with the output control means and adapted for delivering at least one internal defibrillation pulse to the patient's body.

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143. A method forcing cardiac output during hemodynamically compromising malfunction in a patient, comprising the steps of:

- D2
- (a) positioning a plurality of electrodes to enable delivery of electrical pulses which will be transmitted within the patient's body;
  - (b) providing circuitry for detecting the presence of a hemodynamically compromising malfunction in the patient;

D2 (c) detecting the presence of a hemodynamically compromising malfunction in the patient;

(d) delivering a series of pulses through the patient's body, the series including at least one pulse having a voltage of a normal defibrillation voltage level; and

(e) delivering electrical current pulses through the patient's body, the electrical current pulses having a voltage less than a normal defibrillation voltage level, to force contraction in the patient's muscles and to facilitate a minimum level of cardiac output until cessation of the hemodynamically compromising malfunction or until other medical intervention is provided.

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Claim 143 is a method for forcing cardiac output during a hemodynamically compromising malfunction including delivering a series of pulses including at least one pulse having a voltage of a normal defibrillation voltage and delivering electrical current pulses having a voltage less than a normal defibrillation voltage level. Claim 115 is an at least partially implantable device for maintaining some cardiac output of a patient's heart during a hemodynamically compromising malfunction including output control circuitry for delivering multiple electrical current pulses having a voltage level less than the voltage necessary to defibrillate the patient and an internal defibrillator for delivering at least one internal defibrillation pulse.

Applicants request clarification of the Examiner's assertion that Claim 115 has no defibrillation but only sub-threshold pulses given the language in unamended Claim 115 claiming, "an internal defibrillator cooperating with the output control means and adapted for delivering at least one internal defibrillation pulse to the patient's body." Assuming that the Examiner did not read the entire claim or failed to understand the language of the claim, the Applicants maintain that claim 115 and claim 143 do read upon the species provisionally elected.

Thus, Applicants maintain the traversal of the restriction requirement, based upon the rationale submitted in the Response dated December 3, 2001, and maintain the provisional election of the species claiming "defibrillate-first-then-pace" after "hemodynamically compromising malfunction," as embodied by claims 81-143. The Commissioner is hereby authorized to charge any additional filing fees required to

Deposit Account No. 061910. If any additional fees are required to enter the present amendment, Applicant hereby authorizes the Office to charge our deposit account, Deposit Account No. 061910. If the Examiner feels that prosecution of the present application can be materially advanced by a telephonic interview, the undersigned would welcome a call at the number listed below.

Respectfully submitted,

Dated: 7/29/02



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